August 10, 1950.

Dear Tom-

Thanks for sending your revised MS. I thought first to keep, but later thatx thought it would be easier to make some comments on the sheets, so am sending same herewith.

It looks very good.

I have a few quite trivial comments, mostly typographical, on the attached sheets. (Refer to MS for marks).

Will you be paying us a visit this summer? How did the course on bacterial genetics go?

Sincerely,

Joshua Lederberg

Nelson - Comments - p.1   8/10/50

Title: Much better. "Kinetics of genetic recombination in E..c..,K-12" might carry less of a reference to the internal processes of recombination, viz., crossing-over.

1a reproduction for recombination? What, exactly, is nonsexual recombination?
b best? or contributory.

3a I still don't see how syntrophy can yield double reversions. Could you review the calculations (for me - not the paper)? I will admit that, unfortunately, syntrophy might exaggerate types such T+L- from T-L- x B-M- and thereby distort linkage data.

b. E. coli (strain C1?)
c. "pairing process" might be confused with synapsis. "Conjugation process".
d. also if it doesn't.
~~xa.~~
4a ~~Similar investigation~~ Similar experiments,...?

5a ...of parent cells immobilized in agar
b Both expressions reduce to a linear function of the product...
c .... in those experiments. (!)

6a Since Z is negligible compared to N_1 or N_2...
~~bx~~ c. ...in preference to crude empirical frequencies.

7a. Why not a stronger anticipation: "...lay the groundwork for..."

8a Are roller tubes different from those cited by Perkins, Genetics 34:607 '49

11a Look for consistency in (10; 10.0; ten) ml..Ditto, other numbers.

12a. Expression (2) may be tested in other ways:...

13a. Obviate? vitiate or invalidate

17a. Do you mean shaking? Why not shake parents separately
19a. This sentence interrupts the train of the P. Transpose to end or make new P.
20a. Isn't this more clearly shown by direct expts with aged cultures? Are defined media needed for exptlly determinable growth phases.
b. May I suggest another phraseology? The process of syngamy is not necessarily completed in liquid medium in the kinetic experiments. Syngamy might occur in the agar subsequent to an agglutination of the bacteria in the liquid suspension. ..... Saturation would then represent a steady state between hetero-agglutination and redispersion of the aggregates. I'm not too clear how this can explain the induction period followed by a linear phase, unless it takes some time for the cell surfaces to "roughen" in saline solution This could be tested by shaking the suspensions separately first.
21a Why not 10^4 collisions/prototroph.
22 A somewhat more exapanded summary might be useful. Viz., insertion of a sentence that prototroph selection was used.